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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,112	06/26/2003	Shahid Butt	FIS920030087	1111

30449 7590 03/09/2005

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EXAMINER

LEE, EUGENE

ART UNIT PAPER NUMBER

2815

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/604,112

Applicant(s)

BUTT ET AL.

Examiner

Eugene Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 23-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-22 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/26/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I (claims 1-22) in the reply filed on 12/22/04 is acknowledged. The traversal is on the ground(s) that the search and the examination of the entire application could be made without serious burden. This is not found persuasive because the claims of Group I are directed towards apparatus which require a search in class 257, whereas the claims of Group II are directed towards process which require a search in class 438. Therefore, since the claims of Group I and Group II require two separate searches in two separate fields, the requirement is still deemed proper and made FINAL.

Claims 23-29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 12/22/04.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the functional gate conductors include conductors of at least two **different** widths (claims 2, and 13) must be shown or the feature(s) canceled from the claim(s). It does not appear that the figures show functional gate conductors with different widths. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet,

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even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

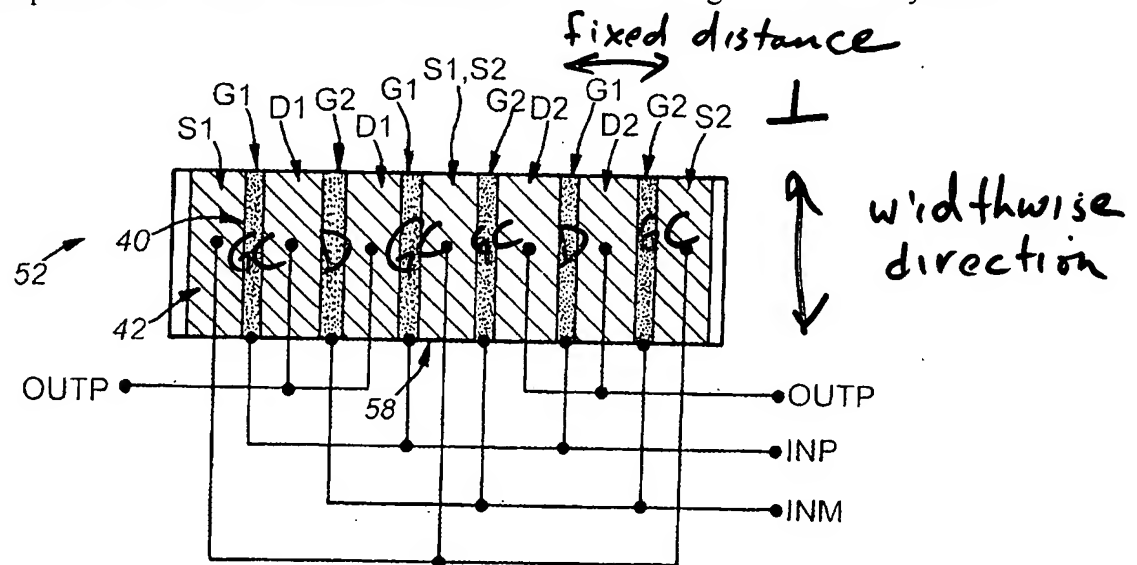
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 4 thru 6, 9 thru 12, 15 thru 17, and 20 thru 22 are rejected under 35

U.S.C. 102(b) as being anticipated by Nakamura 5,767,542. Nakamura discloses (see, for example, Fig. 8) an array of field effect transistors (electronic device) comprising a P substrate (semiconductor substrate) 46, dummy gate conductors G2 of M1D, G1 of M2D; and gate

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conductors G1 of M1, G2 of M2. The gate conductors are positioned substantially parallel to each other in a widthwise direction and periodically spaced apart a fixed distance in a direction substantially perpendicular to said widthwise direction. Please see Fig. 8 immediately below.

**Fig. 8**

Regarding claims 9, 10, 20, and 21, see, for example, Fig. 8 wherein Nakamura discloses source regions S1 and drain regions D1 which are also n⁺ wells.

Regarding claims 11, and 22, see, for example, Fig. 9 wherein Nakamura discloses an oxide layer (gate dielectric) 38.

5. Claims 1 thru 6, 9, 12 thru 17, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Fukuda 6,660,462 B1. Fukuda discloses (see, for example, FIG. 11) a semiconductor device (electronic device) comprising a semiconductor substrate, dummy gate patterns (dummy gate conductors) 19, and transistor gate patterns (functional gate conductors) 18. The dummy gate patterns and transistor gate patterns are positioned substantially parallel to

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each other in a widthwise direction and periodically spaced apart a fixed distance in a direction substantially perpendicular to said widthwise direction.

Regarding claims 2, 3, 13, and 14, see, for example, FIG. 11, wherein Fukuda discloses transistor gate patterns of various different widths and dummy gate patterns of various different widths.

Regarding claim 9, and 20, see, for example, FIG. 11, wherein Fukuda discloses active region (source/drains) 21.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7, 8, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura 5,767,542. Nakamura discloses (see, for example, Fig. 8) an array of field effect transistors (electronic device) comprising a P substrate (semiconductor substrate) 46, dummy gate conductors G2 of M1D, G1 of M2D; and gate conductors G1 of M1, G2 of M2. The gate conductors are positioned substantially parallel to each other in a widthwise direction and periodically spaced apart a fixed distance in a direction substantially perpendicular to said widthwise direction. See paragraph 4, and Fig. 8 above. Nakamura does not disclose the length of said functional gate conductors being a function of positive integer multiples of a minimum length of said gate conductors and of positive integer multiples of said fixed distance, and the

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length of said dummy gate conductors being a function of positive integer multiples of a minimum length of said gate conductors and of positive integer multiples of said fixed distance. However, it was well within the skills of an artisan in the art to optimize the performance of a semiconductor device by adjusting the length of said functional gate conductors and dummy gate conductors in order to match the transistors on a semiconductor substrate and improve a FET circuit's performance. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have the length of said functional gate conductors being a function of positive integer multiples of a minimum length of said gate conductors and of positive integer multiples of said fixed distance, and the length of said dummy gate conductors being a function of positive integer multiples of a minimum length of said gate conductors and of positive integer multiples of said fixed distance because it was well within the skills of an artisan to optimize the performance of a semiconductor device by adjusting the length of said functional gate conductors and dummy gate conductors in order to match the transistors on a semiconductor substrate and improve a circuit's performance. See *In re Aller*, 105 USPQ 233.

INFORMATION ON HOW TO CONTACT THE USPTO

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene Lee whose telephone number is 571-272-1733. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on 571-272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eugene Lee
March 6, 2005

A handwritten signature in black ink, appearing to be 'Eugene Lee', with a stylized, cursive script.